

# CHEMISTRY: SECONDARY EDUCATION BA/BS

The Teacher Education program prepares candidates for certification in grades K-12. The Secondary Education program requires 27 credits of Education course work in professional foundations and studies and 13 credits during internship. Students apply for admission to the program after successfully completing nine credits of Education course work in professional foundations. During the course of the studies, candidates may be asked to reapply to the program if their GPA falls below 3.0.

Teaching endorsement areas are attached to a Standard Instructional Certificate (grades K-12), according to Idaho Teacher Certification standards. All endorsements require a minimum of 45 semester credits, with the exception of dual endorsements where 30 semester for a major endorsement and 20 semester credits for a minor endorsement is required. The following LC State areas are approved for teaching field majors: Biology, Chemistry, Communication Arts, Earth Science, English; Kinesiology-Physical Education K-12 and Health 6-12; Mathematics; Natural Sciences; Psychology; and Social Science with a History emphasis (see degree requirements for each major). Teacher candidates must successfully pass the related Praxis II exam in their teaching content area(s).

For marketability purposes, students are encouraged to pursue endorsements and minors in a second teaching field; consult with an advisor for the proper procedure. Secondary Education majors must have a content area advisor and a Secondary Education advisor.

Graduates from other colleges or universities seeking secondary teacher certification must fulfill all Secondary Education professional course work requirements in addition to meeting all academic major or minor teaching field requirements for subject area endorsement.

Students in the Teacher Education Certification program are expected to provide evidence through performance that they have met Idaho's requirements for certification and become dedicated and knowledgeable professionals, content specialists, competent educational designers, capable educational facilitators, insightful educational evaluators, reflective professionals, and culturally responsive professionals before being recommended for teacher certification.

## Advising

Secondary Teacher Education candidates must have two advisors; one for their academic major and one for teacher certification.

## General Education Requirements

Code	Title	Credits
<b>Written Communication</b>		
Select one of the following:		6.00
ENGL-101 & ENGL-102	WRITING AND RHETORIC I and WRITING AND RHETORIC II	
ENGL-109	COLLEGE WRITING AND RESEARCH	
<b>Oral Communication</b>		
Select one from the following:		3.00
COMM-101	FUNDAMENTALS OF ORAL COMMUNICATION	
COMM-203	SMALL GROUP COMMUNICATION	
COMM-204	PUBLIC SPEAKING	
<b>Mathematical Ways of Knowing</b>		
Select one of the following:		3.00-5.00
MATH-143	COLLEGE ALGEBRA	
MATH-147	COLLEGE ALGEBRA AND TRIGONOMETRY	
MATH-170	CALCULUS I	
<b>Humanistic &amp; Artistic Ways of Knowing</b>		
Select one course from two categories:		6.00-8.00
<b>Literature</b>		
ENGL-175	LITERATURE AND IDEAS	
ENGL-257	WORLD CLASSICS	
ENGL-258	INTERNATIONAL LITERATURE	
ENGL-260	NATIVE AMERICAN LITERATURE	
ENGL-261	MYTHOLOGIES	
<b>Arts</b>		
ART-100	INTRODUCTION TO ART	
HUM-101	THE ART AND HISTORY OF THE MOTION PICTURE	

HUM-150	INTRODUCTION TO THE ARTS	
MUS-101	SURVEY OF MUSIC	
MUS-102	MUSIC IN AMERICA	
MUS-150	WORLD MUSIC	
MUS-151	HISTORY OF MUSICAL THEATER	
MUS-152	HISTORY OF JAZZ AND POPULAR MUSIC STYLES	
THEA-101	SURVEY OF THE THEATER	
<b>Language</b>		
NP-101	NEZ PERCE LANGUAGE AND CULTURE	
NP-102	NEZ PERCE LANGUAGE AND HISTORY	
SPAN-101	ELEMENTARY SPANISH I	
SPAN-102	ELEMENTARY SPANISH II	
<b>Scientific Ways of Knowing</b>		
CHEM-111	PRINCIPLES OF CHEMISTRY I	4.00
Select one of the following:		4.00-5.00
PHYS-111	GENERAL PHYSICS I	
PHYS-211	PHYSICS FOR SCIENTISTS AND ENGINEERS I	
<b>Social &amp; Behavioral Ways of Knowing</b>		
PSYC-205	LIFESPAN DEVELOPMENTAL PSYCHOLOGY	3.00
Select one of the following:		3.00
ANTH-102	CULTURAL ANTHROPOLOGY	
ANTH-120	WORLD PREHISTORY	
ANTH-170	INTRODUCTION TO NATIVE AMERICAN STUDIES	
ECON-201	PRINCIPLES OF MACROECONOMICS	
ECON-202	PRINCIPLES OF MICROECONOMICS	
GEOG-102	INTRODUCTION TO GEOGRAPHY	
HIST-101	WORLD HISTORY I	
HIST-102	WORLD HISTORY II	
HIST-111	UNITED STATES HISTORY I	
HIST-112	UNITED STATES HISTORY II	
HRPT-184	DIVERSITY IN ORGANIZATIONS	
HRPT-185	HUMAN RELATIONS IN ORGANIZATIONS	
POLS-101	AMERICAN NATIONAL GOVERNMENT	
POLS-237	INTERNATIONAL POLITICS	
POLS-285	COMPARATIVE GOVERNMENT	
SOC-101	INTRODUCTION TO SOCIOLOGY	
SOC-102	SOCIAL PROBLEMS	
SS-184	DIVERSITY IN ORGANIZATIONS	
SS-185	HUMAN RELATIONS IN ORGANIZATIONS	
<b>Diversity</b>		
Select one of the following:		3.00-4.00
ANTH-102	CULTURAL ANTHROPOLOGY	
ANTH-120	WORLD PREHISTORY	
ANTH-170	INTRODUCTION TO NATIVE AMERICAN STUDIES	
ANTH-360	RACE AND ETHNICITY	
COMM-345	INTERCULTURAL COMMUNICATION	
ENGL-258	INTERNATIONAL LITERATURE	
ENGL-474	NATIVE AMERICAN WRITTEN LITERATURE	
GEOG-102	INTRODUCTION TO GEOGRAPHY	
HIST-101	WORLD HISTORY I	
HIST-102	WORLD HISTORY II	
HIST-111	UNITED STATES HISTORY I	

HIST-112	UNITED STATES HISTORY II
HRPT-184	DIVERSITY IN ORGANIZATIONS
ID-300C	ETHICS AND IDENTITY
KIN-220	SOCIAL-CULTURAL ASPECTS OF SPORTS
NP-101	NEZ PERCE LANGUAGE AND CULTURE
NP-102	NEZ PERCE LANGUAGE AND HISTORY
POLS-285	COMPARATIVE GOVERNMENT
SOC-101	INTRODUCTION TO SOCIOLOGY
SPAN-101	ELEMENTARY SPANISH I
SPAN-102	ELEMENTARY SPANISH II
SPAN-201	INTERMEDIATE SPANISH I
SPAN-202	INTERMEDIATE SPANISH II
SS-184	DIVERSITY IN ORGANIZATIONS

**Integrative Seminar: Ethics & Values**

Select one of the following: 3.00

ID 300A - 300Z (see course descriptions for options)

ID-301A HELLS CANYON INSTITUTE

**Foreign/Heritage Language**

Select 16 credits of language if selecting Bachelor of Arts Degree 16.00

**Total Credits****38.00-44.00**

## Program Requirements

Secondary certification candidates must meet the graduation requirements for their major and the Secondary Teacher Education Program and must have two advisors. (see below)

Code	Title	Credits
<b>Chemistry Program</b>		
CHEM-112	PRINCIPLES OF CHEMISTRY II	4.00
CHEM-300	PHYSICAL CHEMISTRY I WITH LABORATORY	4.00
CHEM-306	PHYSICAL CHEMISTRY II	3.00
CHEM-325	QUANTITATIVE ANALYSIS	3.00
CHEM-325L	QUANTITATIVE ANALYSIS LABORATORY	2.00
CHEM-371	ORGANIC CHEMISTRY I	3.00
CHEM-372	ORGANIC CHEMISTRY II	3.00
CHEM-373	ORGANIC CHEMISTRY I LAB	1.00
CHEM-376	ORGANIC CHEMISTRY II LAB	2.00
CHEM-454	INSTRUMENTAL ANALYSIS	5.00
CHEM-463	INORGANIC CHEMISTRY	4.00
CHEM-481	BIOCHEMISTRY I	4.00
MATH-170	CALCULUS I (Required if not taken as core)	
MATH-175	CALCULUS II	4.00
PHYS-112	GENERAL PHYSICS II	4.00-5.00
or PHYS-212	PHYSICS FOR SCIENTISTS AND ENGINEERS II	

**Secondary Education Certificate**

See Secondary Education Certificate Requirements below

**Total Credits****46.00-47.00**

<sup>1</sup> See Catalog section "Teacher Education Division: Secondary Teacher Certification" regarding certification requirements for this major. Selective course choices could be affected.

## Secondary Education Certificate Requirements

Application for admission to the Teacher Education Program is required after successful completion of the first three Phase I courses.

Code	Title	Credits
<b>Phase I - Professional Foundations of Education</b>		
ED-214	PRINCIPLES OF EDUCATION <sup>1</sup>	3.00
ED-225	TECHNOLOGIES FOR TEACHING, K-12	3.00
ED-318	ASSESSMENT OF LEARNING <sup>1</sup>	3.00
ED-321	EDUCATIONAL PSYCHOLOGY <sup>1</sup>	3.00
ED-345	CULTURALLY RELEVANT TEACHING	3.00
SE-322	INCLUSION STRATEGIES K-12 (may be taken in Phase I or Phase II)	3.00
<b>Phase II - Professional Studies in Education</b>		
ED-445	INSTRUCTIONAL STRATEGIES AND CLASSROOM MANAGEMENT, 6-12	3.00
ED-447	TEACHING METHODS IN THE CONTENT AREA	2.00
RE-309	DISCIPLINARY LITERACY	3.00
<b>Phase III - Instructional Methods in Education</b>		
ED-452	INTERNSHIP SEMINAR	1.00
ED-460	PROFESSIONAL INTERNSHIP IN EDUCATION 6-12	12.00
<b>Total Credits</b>		<b>39.00</b>

<sup>1</sup> Additional requirements must be met for teacher certification. See your Teacher Education Division advisor for details.

No grade lower than a "C-" will be accepted in any General Education core, Content Major, or 200-level Professional Foundations course. No grade lower than a "B-" will be accepted in any 300- or 400-level courses for Secondary Education.

A minimum cumulative GPA of 3.0 is required for admission into the Secondary Teacher Education Program. Candidates must also maintain a 3.0 cumulative GPA in their content area classes.

## Sequential Plan of Study

Course	Title	Credits
<b>First Year</b>		
<b>Fall</b>		
ENGL-101	WRITING AND RHETORIC I	3.00
CORE	Oral Communication	3.00
CHEM-111	PRINCIPLES OF CHEMISTRY I	4.00
CORE	MATH-143, MATH-147 or MATH-170	3.00-5.00
<b>Credits</b>		<b>13.00-15.00</b>
<b>Spring</b>		
ENGL-102	WRITING AND RHETORIC II	3.00
CORE	Humanistic & Artistic Ways of Knowing	3.00
PSYC-205	LIFESPAN DEVELOPMENTAL PSYCHOLOGY	3.00
CHEM-112	PRINCIPLES OF CHEMISTRY II	4.00
<b>Credits</b>		<b>13.00</b>
<b>Second Year</b>		
<b>Fall</b>		
CHEM-300	PHYSICAL CHEMISTRY I WITH LABORATORY	4.00
CORE	Diversity	3.00
CORE	Humanistic & Artistic Ways of Knowing	3.00
PHYS-111 or PHYS-211	GENERAL PHYSICS I or PHYSICS FOR SCIENTISTS AND ENGINEERS I	4.00-5.00
MATH-175	CALCULUS II	4.00
<b>Credits</b>		<b>18.00-19.00</b>
<b>Spring</b>		
CORE	Integrative Seminar: Ethics & Values	3.00
CORE	Social & Behavioral Ways of Knowing	3.00

PHYS-112 or PHYS-212	GENERAL PHYSICS II or PHYSICS FOR SCIENTISTS AND ENGINEERS II	4.00-5.00
CHEM-306	PHYSICAL CHEMISTRY II	3.00
CHEM-325	QUANTITATIVE ANALYSIS	3.00
<b>Credits</b>		<b>16.00-17.00</b>
<b>Third Year</b>		
<b>Fall</b>		
CHEM-371	ORGANIC CHEMISTRY I	3.00
CHEM-373	ORGANIC CHEMISTRY I LAB	1.00
CHEM-454	INSTRUMENTAL ANALYSIS	5.00
CHEM-463	INORGANIC CHEMISTRY	4.00
<b>Credits</b>		<b>13.00</b>
<b>Spring</b>		
CHEM-372	ORGANIC CHEMISTRY II	3.00
CHEM-376	ORGANIC CHEMISTRY II LAB	2.00
CHEM-481	BIOCHEMISTRY I	4.00
<b>Credits</b>		<b>9.00</b>
<b>Total Credits</b>		<b>82.00-86.00</b>

## Secondary Education Certificate Requirements

Course	Title	Credits
<b>First Year</b>		
<b>Fall</b>		
ED-214	PRINCIPLES OF EDUCATION	3.00
ED-225	TECHNOLOGIES FOR TEACHING, K-12	3.00
ED-318	ASSESSMENT OF LEARNING	3.00
ED-321	EDUCATIONAL PSYCHOLOGY	3.00
ED-345	CULTURALLY RELEVANT TEACHING	3.00
<b>Credits</b>		<b>15.00</b>
<b>Spring</b>		
ED-445	INSTRUCTIONAL STRATEGIES AND CLASSROOM MANAGEMENT, 6-12	3.00
ED-447	TEACHING METHODS IN THE CONTENT AREA	2.00
RE-309	DISCIPLINARY LITERACY	3.00
SE-322	INCLUSION STRATEGIES K-12	3.00
<b>Credits</b>		<b>11.00</b>
<b>Second Year</b>		
<b>Fall</b>		
ED-452	INTERNSHIP SEMINAR	1.00
ED-460	PROFESSIONAL INTERNSHIP IN EDUCATION 6-12	12.00
<b>Credits</b>		<b>13.00</b>
<b>Total Credits</b>		<b>39.00</b>

Graduates with a BA/BS Chemistry: Secondary Education go on to obtain careers in a variety of fields:

- Secondary Chemistry Teacher (6-12)
- Adult and Continuing Education
- Research
- Lab Technician
- Training Specialist
- Business and Industry
- Instructional Coach